IN THE SPECIFICATION

Page 4, after line 15, replace the text entered in the amendment on September 20, 2002 with the following text:

--BRIEF DESCRIPTION OF THE DRAWING--

Fig. 1A illustrates the nucleotide and amino acid sequences of the synthetic gene (Bac 19) (SEQ ID NOS: 1 and 2) and the "native gene" (PF19) of *P. falciparum* described by Chang et al (SEQ ID NO:3).

Fig. 1B illustrates the nucleotide and amino acid sequences of the synthetic gene (Bac 19) (SEQ ID NOS:4 and 5) and the "native gene" (PF19) of the Uganda Palo Alto isolate of *P. falciparum* (SEQ ID NO:6).

Fig 1C illustrates the PfMSP1$_{P19}$A recombinant protein sequence (with nucleotide sequence--SEQ ID NOS: 7 and 8) before cutting out the signal.

Fig. 1D illustrates the PfMSP1$_{P19}$A recombinant protein (with nucleotide sequence--SEQ ID NOS: 9 and 10) after cutting out the signal sequence.

Fig. 2A is an immunoblot using SDS-PAGE of the soluble recombinant PfMSP1$_{P19}$A antigen purified by immunoaffinity in the presence (reduced) or absence (non-reduced) of -mercaptoethanol.

Fig. 2B is an immunoblot with human antiserum of recombinant purified MSP-1 P19 from *P. vivax* and *P. cynomolgi* under non-reduced (NR), reduced only in the charging medium (R) and irreversibly reduced (IR) conditions.

Fig. 3A is an immunoblot of the soluble PvMSPl$_{p42}$ recombinant antigen in the presence of protein fractions derived from merzoites of *P. falciparum* and separately isoelectric focusing in the presence (reduced) or absence (nonreduced) of -mercaptoethanol.

Fig. 3B is a graph illustrating the results of an ELISA inhibition technique of *P. vivax* MSP-1 P42 and P19 antigens by the antiserum of individuals with an acquired immunity to *P. vivax.*

Fig. 4 A.1 and A.2 recites nucleotide sequences (SEQ ID NOS:11-14). The underlined oligonucleotides originate from *P. vivax* and are used as primers in a PCR reaction. ~~The lower portion of~~ Fig.4 B illustrates the percent identity between two isolates of *P. vivax* and *P. cynomolgi.*

Fig. 5 shows curves illustrating the variation in the measured parasitemia as the number of parasited red blood cells per microliter of blood as the function of time passed after infection. Curve A corresponds to the average values observed in three vaccinated monkeys and curve B corresponds to the average values in five controls.

Fig. 6A is a graph illustrating the parasitemia observed in non-vaccinated control animals as a function of time after injection.

Fig. 6BA is a graph illustrating the parasitemia observed in control animals which contained a saline solution also contain Freunds adjuvant as a function of time after injection.

Fig. 6C is a superposition of Figures 6A and 6B.

Fig. 6D is a graph illustrating parasitemia at the end of vaccination with p42 as a function of time.

Fig. 6E is a graph illustrating parasitemia in animals vaccinated with pl9 alone as a function of time.

Fig. 6F is a graph illustrating parasitemia in animals with a mixture of P42 and P19 as a function of time.

Fig. ~~6G~~ 6G.1 and 6G.2is the data obtained to produce the graphs in Figs. 6A to 6F.

Fig. 7A is an immunoblot illustrating the in vivo response of monkeys to injections of pl9 with Freunds adjuvant (1), with alum (2) and in the form of liposomes (3).

Fig. 7B is an immunoblot illustrating the in vivo response of a squirrel monkey after three injections with p19 with Freunds adjuvant, with alum and in the form of liposomes.

Fig. 8A is a graph illustrating the percent parasitemia versus days post infection of six monkeys, which were immunized with recombinant MSP-1 (p19) six months earlier.

Fig. 8B is a graph illustrating the percent parasitemia versus days post infection of six monkeys that were immunized with normal saline and an adjuvant.

Fig. 8C is a graph illustrating the percent parasitemia versus days post infection of monkeys that were used as controls.

Fig. 8D is the data obtained to produce the graphs in Figs 8A to 8C.

Fig. 9A is a graph illustrating the percent parasitemia versus days post infection of 2 macaques immunized with recombinant p19 and alum.

Fig. 9B is a graph illustrating the percent parasitemia versus days post infection of 2 macaques immunized with recombinant p19 and alum.

Fig. 9C is a graph illustrating the percent parasitemia versus days post infection of a macaque immunized with p19.

Fig. 9D is a graph illustrating the percent parasitemia versus days post infection of 3 control macaques immunized with physiological water and alum.

Fig. ~~9E~~ 9E.1 and 9E.2 is the data obtained to generate the graphs in Figs 9A to 9D.

Fig. 10A is a graph illustrating the percent parasitemia versus days post infection in a squirrel monkey immunized with MSP-1 p19 and alum.

Fig. 10B is a graph illustrating the percent parasitemia versus days post infection in a squirrel monkey immunized with MSP-1 p19 and Freunds.

Fig. 10C is a graph illustrating the percent parasitemia versus days post infection in a squirrel monkey immunized with MSP-1 p19 with liposomes.

Fig. 10D is a graph illustrating the percent parasitemia versus days post infection in a squirrel monkey immunized with alum as the control.

Fig. 10E is a graph illustrating the percent parasitemia versus days post infection in a squirrel monkey immunized with Freunds as the control.

Fig. 10F is a graph illustrating the percent parasitemia versus days post infection in a squirrel monkey immunized with liposomes as the control.

Fig. 10G is a graph illustrating the percent parasitemia versus days post infection in a squirrel monkey immunized with physiological water as the control.

Fig. 11A is a drawing of the backbone of $MSP1_{19}$ from *P. cynomolgi* showing disulfide bridges in bold line.

Fig. 11B is a drawing of the backbone of $MSP1_{19}$ showing positions of sequence differences between P. *cynomolgi and P. vivax.*

Fig. 11C is a drawing of the backbone of homology-modeled $MSP1_{19}$ of *P. falciparum* showing positions of sequence differences with *P. cynomolgi.*

Fig. 12A-F are reconstructed mass spectra and m/z spectra respectively of metalloaffinity purified *P. cynomolgi* (A, B), *P. falciparum* (C,D) and *P. vivax* (E,F) $MSP1_{19}$.

~~Fig. 12 D is a NOESY spectrum of *P. vivax* $MSP1_{19}$.~~

~~Fig. 12 E is a NOESY spectrum of *P. vivax* $MSP1_{19}$.~~

~~Fig. 12 F is a NOESY spectrum of *P. vivax* $MSP1_{19}$.~~

Fig. 12.0a is a NOESY spectrum *of P.cynomolgi* $MSP1_{19}$.

Fig. 12.0b is a NOESY spectrum of *P. cynomolgi* $MSP1_{19}$.

Fig. 12.0c is a TOCSY spectrum of *P. cynomolgi* $MSP1_{19}$.

Fig. 12.1a is a NOESY spectrum of *P.vivax* $MSP1_{19}$.

Fig. 12.1b is a NOESY spectrum of *P. vivax* $MSP1_{19}$.

Fig. 12.1c is a TOCSY spectrum of *P. vivax* $MSP1_{19}$.

Fig. 12.2a is a NOESY spectrum of *P. falciparum* $MSP1_{19}$.

Fig. 12.2b is a NOESY spectrum of *P. falciparum* $MSP1_{19}$.

Fig. 12.2c is a TOCSY spectrum of *P. falciparum* $MSP1_{19}$.

Fig. 13 A-F show ELISA titration of tertiary monkey anti *P. cynomolgi* recombinant MSP antisera. Plates were coated either with native (N) or reduced, denatured (D) *P. cynomolgi* $MSP1_{19}$ or $MSP1_{42}$. OD: Optical density at 492 nm. Figures A to F represent respectively, monkeys 426-427-429 (anit-$MSP1_{19}$) and 428-434-435 (anti-$MSP1_{42}$) (Perera et al. 1998).

Fig. 14 A and B show ELISA analysis of human *P. vivax* infected donors under reducing and non reducing conditions using immunoaffinity (A) or metallo affinity purified (B) $MSP1_{19}$ coating antigen.

Fig. 15 shows ELISA titration of murine anti *P. cynomolgi* $MSP1_{19}$ and $MSP1_{42}$ antisera

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS